



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,000	02/12/2002	Wayne E. Shanks	1689.0260000	5128
28393	7590	10/05/2004	EXAMINER LA, ANH V	
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVE., N.W. WASHINGTON, DC 20005			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/073,000

**Applicant(s)**

SHANKS ET AL.

**Examiner**

Anh V La

**Art Unit**

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-12 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Vega (US 6,147,605).

Regarding claim 1, Vega discloses a radio frequency identification (RFID) tag device comprising an antenna 112, 114, a receiver (see figure 3) coupled to the antenna to receive a symbol from the antenna, and a modulator 221, 222, wherein the modulator is configured to receive a response value and to select one of a plurality of frequencies according to the response value to be selected frequency signal (column 6, lines 15-55), wherein the modulator is configured to backscatter modulate the received symbol according to the selected frequency signal to produce a backscatter modulated symbol and wherein the antenna is configured to transmit the backscatter modulated symbol (col. 4, lines 1-55).

Regarding claim 2, Vega discloses the modulator being configured to amplitude modulate the received symbol according to the selected frequency signal to produce the backscatter modulated symbol (col. 7, lines 1-25).

Regarding claim 3, Vega discloses the antenna being configured to receive a RF carrier signal and the receiver demodulating the received RF carrier signal to the received symbol (see fig. 1-6).

Regarding claim 4, Vega discloses the modulator 221, 222 selecting a first frequency for the selected frequency signal if the response value is a first predetermined value and selecting a second frequency for the selected frequency signal if the response value is a second predetermined value, and the transmitted backscatter modulated symbol being a first backscatter modulated symbol when the modulator selects the first frequency and the transmitted backscatter modulated symbol is second backscatter modulated symbol when the modulator selects a second frequency (col. 4, lines 1-55, col. 6, lines 15-55).

Regarding claim 5, Vega discloses the received symbol includes a logic low portion followed by logic high portion (1004, 1008) (col. 13, lines 1-30).

Regarding claim 6, Vega discloses the modulator including a switch 402.

Regarding claim 7, Vega discloses the switch being a single pole, single throw switch (fig. 10).

Regarding claim 8, Vega discloses the switch modulating the received symbol by varying the return loss of the antenna according to the selected frequency signal (col. 4, lines 1-55, col. 6, lines 15-55).

Art Unit: 2636

Regarding claim 9, Vega discloses the switch varying the return loss of the antenna by coupling the antenna to a voltage level 602 when the switch is on that is not equal to the RF voltage level at the antenna when the switch is off.

Regarding claim 10, Vega discloses a state machine 216, 218.

Regarding claim 11, Vega discloses a data programming unit 218, 220 coupled to the state machine.

Regarding claim 12, Vega discloses an oscillator 1006 generating an oscillator frequency.

Regarding claim 14, Vega discloses an oscillator 1006.

Regarding claim 15, Vega discloses an oscillator 1006 and a plurality of frequency dividers (col. 4, lines 1-55, col. 6, lines 15-55).

Regarding claim 16, Vega discloses a reader that communicates with a RFID tag device comprising a transmitter 204 transmitting a rf carrier signal modulated with a data symbol, a receiver (in 204) that receives at least one backscatter symbol related to the transmitted data symbol, a logic module 116 that determines at least one backscatter frequency of the at least one backscatter symbol, wherein the logic module determines that the at least one backscatter symbol represents a first data value when the at least one backscatter frequency includes a first frequency, and determines that the at least one backscatter symbol represents a second data value when the at least backscatter frequency is determined to include a second frequency (col. 4, lines 1-55, col. 6, lines 15-55).

Art Unit: 2636

Regarding claim 17, Vega clearly discloses the first data value is a "0" bit and the second data value is a "1" bit.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vega.

Regarding claim 13, Vega discloses all the claimed subject matter as set forth above in the rejection of claim 12, but does not clearly disclose the frequency being greater than 1MHz. However, it would have been obvious to have the frequency being greater than 1MHz since it is not inventive to discover the optimum or workable ranges by routine experimentation.

Regarding claim 18, Vega discloses all the claimed subject matter as set forth above in the rejection of claim 12, but does not clearly disclose the first frequency being equal to 2.5 1MHz and the second frequency being equal to 3.5 1MHz. However, it would have been obvious to have the first frequency being equal to 2.5 1MHz and the second frequency being equal to 3.5 1MHz since it is not inventive to discover the optimum or workable ranges by routine experimentation.

Art Unit: 2636

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Davidson, Heinrich, Wood, and Evans teach RFID systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh V La whose telephone number is (571) 272-2970. The examiner can normally be reached on Mon-Fri from 9:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**ANH V. LA**  
**PRIMARY EXAMINER**

Anh V La  
Primary Examiner  
Art Unit 2636

AI  
September 20, 2004